

## CLAIMS

1       *(Original)* 1. An image digitizing system comprising:  
2       a spatial array of sensors for converting a visual image to signals,  
3       each of said sensors providing a respective signal;  
4       a signal converter for converting said signals into pixel data  
5       describing an array of pixels, each of said pixels being associated  
6       with a respective one of said sensors, the pixel data associated with  
7       most of said pixels being a function of signals provided by the  
8       respective sensors, the pixel data associated with at least one of  
9       said pixels not being a function of a signal from the respective  
10      sensor but being a function of one or more signals from  
11      neighboring sensors.

1       *(Original)* 2. An image digitizing system as recited in Claim 1  
2       wherein multiple pixels are associated with each sensor so that:  
3       for most sensors, all pixels associated with that sensor have  
4       values that are functions of the signal provided by that sensor; and  
5       for said least one sensor, all pixels associated therewith have  
6       values that are not functions of the signals provided by that sensor  
7       but are functions of signals provided by neighboring sensors.

1           (Original) 3. An image digitizing system as recited in Claim 2  
2 wherein said signal converter comprises:  
3       an analog-to-digital converter for converting said signals to  
4 signal data;  
5       a data processor for converting said signal data to said pixel  
6 data; and  
7       memory for storing sensor calibration values that said data  
8 processor uses in converting said signal data to said pixel data, said  
9 sensor calibration values being selected from a set of possible  
10 calibration values, most of said possible calibration values  
11 determining the function accordingly to which a pixel value is  
12 determined from the signal data from the signal from the associated  
13 sensor, a first of said possible calibration values indicating that the  
14 pixel value for the corresponding pixel is not to be a function of  
15 signal data from the associated sensor but a function of the signal  
16 data from a neighboring sensor.

1       (Original) 4. An image digitizing system as recited in Claim 3  
2 wherein said sensor calibration values are two dimensional, with an  
3 offset-function value corresponding to an offset function and a  
4 scaling-function value corresponding to a scaling function, said  
5 possible calibration values defining an extreme scaling-function  
6 value and an extreme offset-function value, said first possible  
7 calibration value specifying said extreme offset-function value and  
8 said extreme scaling-function value.

1        *(Original)* 5. An image digitizing method comprising:  
2        calibrating an array of sensors so as to distinguish “good” and  
3        “bad” sensors;  
4        using said array to convert a visual image to signals;  
5        converting said signals to image data including pixel values  
6        associated with an array of pixels, each pixel corresponding to a  
7        respective one of said sensors, pixel values associated a good sensor  
8        being a function of the signal provided by that good sensor, pixel  
9        values associated with a bad sensor not being a function of the  
10       signal provided by that bad sensor but being a function of at least  
11       one signal provided by a neighboring good sensor.

1        *(Original)* 6. A method as recited in Claim 5 wherein said image  
2        data describes a series of raster lines, each of said raster lines  
3        including a series of said pixels, all pixels associated with said bad  
4        sensor having values determined not as a function of a signal  
5        provided by said bad pixel but as a function of said neighboring  
6        good sensor.

1        *(Original)* 7. A method as recited in Claim 6 wherein said  
2        converting step involves:  
3        converting said signals into digital signal data; and  
4        converting said digital signal data into said pixel data using  
5        sensor calibration values associated with respective ones of said  
6        sensors, said sensor calibration values being selected from a range  
7        of possible calibration values, said bad sensor being associated with  
8        a possible sensor calibration value that indicates that the  
9        corresponding pixel data is determined not as a function of its  
10       signal but as a function of the signal of a neighboring sensor.

1       *(Original)* 8. An image digitizing method as recited in Claim 7  
2 wherein said sensor calibration values are two dimensional, with an  
3 offset-function value corresponding to an offset function and a  
4 scaling-function value corresponding to a scaling function, said  
5 possible calibration values defining a maximal scaling-function  
6 value and a maximum offset-function value, the sensor calibration  
7 value for said bad sensor specifying said maximum offset-function  
8 value and said maximum scaling-function value.

1       *(Original)* 9. An image-digitization method comprising the steps  
2 of:  
3       using an array of sensors to generate a series of signals; and  
4       converting said signals into pixel data describing an array of  
5 pixels, each of said pixels being associated with a respective one of  
6 said sensors, the pixel data associated with most of said pixels  
7 being a function of signals provided by the respective sensors, the  
8 pixel data associated with at least one of said pixels not being a  
9 function of a signal from the respective sensor but being a function  
10 of a signal from a neighboring sensor.

1       *(Original)* 10. A method as recited in Claim 9 wherein plural  
2 pixels are associated with each of said sensors so that for said at  
3 least one of said sensors none of the pixels associated therewith are  
4 described by pixel data that is a function of a signal associated with  
5 that sensor.

1        *(Original)* 11. A method as recited in Claim 10 wherein said  
2        converting step involves:  
3        converting said signals into digital signal data; and  
4        converting said digital signal data into said pixel data using  
5        sensor calibration values associated with respective ones of said  
6        sensors, said sensor calibration values being selected from a range  
7        of possible calibration values, at least one of said possible  
8        calibration values indicating a sensor for which the corresponding  
9        pixel data is determined not as a function of its signal but as a  
10       function of the signal of a neighboring sensor.

1        *(Original)* 12. An image digitizing method as recited in Claim 11  
2        wherein said sensor calibration values are two dimensional, with an  
3        offset-function value corresponding to an offset function and a  
4        scaling-function value corresponding to a scaling function, said  
5        possible calibration values defining a maximal scaling-function  
6        value and a maximum offset-function value, said first possible  
7        calibration value specifying said maximum offset-function value and  
8        said maximum scaling-function value.